

blm - alaska

frontiers

managing public lands for multiple use

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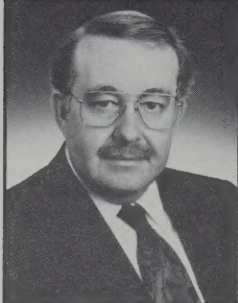
RAPS students receive
tuition waivers from UAF



Orrin Frederick

Mike Tietz, an employee of Tanana Chiefs Conference, scribes a bearing tree that will serve as a permanent marker to where survey monuments are located. Public law "638"—the Indian Self-Determination Act—gives Natives the right to survey land allotted to them under the Alaska Native Claims Settlement Act. The photo was taken near the village of Tanana.

The Director's Column



By Jim Baca

Fall is harvest time in North America. Mention of harvest brings thoughts of America's magnificent fields of grain, of corn shocks and pumpkins and other market crops. Fall is also a time of major harvests

on the nation's public lands. Many people think of the public lands only as mining and grazing lands, but the rich and varied harvest which comes from land managed by the BLM is amazing. During fiscal year 1991, there were 23,192 separate sales of non-timber and vegetal materials. These sales put a quarter million dollars in the U.S. Treasury.

One of the tastiest harvests is of the nut of the pine, with more than 30 tons of pine nuts gathered commercially in good years in the Great Basin and New Mexico. Families can collect up to 25 pounds each, without a permit, so additional unknown hundreds of pounds are harvested during family outings.

Oregon and California abound with wild berries. Commercial harvest is of vegetation, with BLM selling new young plants by the bunch. In late summer hundreds of families harvest the berries themselves, often preserving them as jams and jellies.

Our public lands hold one of the greatest reserves of native grass and plant seeds. Commercial harvesting is limited and carefully controlled to prevent damage to stands of the plants. The forests of Oregon also hold Pacific Yew, a tree whose bark is critical to creation of taxol, a drug used to treat cancer. While active harvest presently occurs on private lands, the BLM forests hold a reserve supply of the trees.

A significant harvest of non-consumable items occurs on public lands. More than 40,000 Christmas trees were cut on public lands for the 1991 holiday. Other commercial sales at holiday time were made of boughs, cones, greens and moss. The plant harvest includes yucca, cactus and joshua among other desert vegetation. In wooded areas, sales are made of "wildings" (young trees and shrubs).

BLM-managed lands are the site of untold hours of family recreation and provide habitat for a major percentage of the wildlife of the Western United States. Seldom noticed is the harvestable production of those same lands. Non-timber and vegetative sales for renewable resources are undemanding of the land and cause virtually no lasting impact.

The harvest which occurs on the public lands is a part of our business in which we can all take pride.

Native surveyors and BLM team up

Each year Alaska BLM land surveyors head out to remote locations to mark the boundaries of lands selected by Alaska Native corporations and the State of Alaska. These surveys provide the basis for patent and transfer of millions of acres of land from federal to private ownership.

This year, in addition to surveying state-selected lands, BLM land surveyors served as on-site monitors and technical advisors to several Native organizations doing land survey under contract to BLM. The Indian Self-Determination Act (Public Law 93-638) allows Alaska Native organizations to contract with BLM to do land survey of lands they have selected under the Alaska Native Claims Settlement Act and the Native Allotment Act.

BLM land surveyor Orrin Frederick accompanies contract surveyors to the field each year to monitor progress. Says Frederick, "This year we did the normal field inspections—we just changed our hats a little and went out and did the same thing for a different contractor. Since the 638 program is so new, a lot of training went into the process. We helped explain specifications and procedures, and tried to give direction on how to solve survey problems that crop up. Overall, it went quite well."

Field survey in Alaska typically ends in late September or early October. This year all 638 surveys were completed on schedule in early September. The contractors will prepare the required field notes and plats over the next several months, and submit the completed surveys to BLM by May 1, 1994.

BLM's Steve Hamrick coordinates the 638 survey contracts. Says Hamrick, "The review process for 638 surveys is the same as any contract survey. We do a thorough in-house review to confirm the accuracy and quality of the work before the final surveys are approved and signed. Our on-site inspectors were satisfied with the work throughout the summer. We don't anticipate any problems with the final products."

—Teresa McPherson

1993 "638" Field Survey Programs

- Chistochina (Copper River Native Assn.)
- Kotzebue Part I (Maniilaq Assn.)
- Tanana (Tanana Chiefs Conference)
- Cantwell (Copper River Native Assn.)
- Chalkyitsik (Tanana Chiefs Conference)
- Eyak-Chugach Native selections (Chugach Engineering/Eyak Development Corp.)
- Tatitlek Native selections (Tatitlek Corp.)

BLM builds new recreation facilities

- A new BLM campground was built at Marion Creek, near Coldfoot on the Dalton Highway. Situated in open spruce forest, the campground offers 27 camp sites, a well, four toilets, and trailhead parking. From the campsites you can see views of the beautiful high peaks of the Brooks Range. Wildlife such as Dall sheep, caribou, moose and even bears are seen in the area.

This campground and several other projects around the state were funded by the Intermodal Surface Transportation Efficiency Act (ISTEA) through the Alaska Department of Transportation. The act provides money for enhancements adjacent to federal highways. BLM designed the campground. The \$400,000 construction contract was administered by the Alaska Department of Transportation.

- A new trailhead, offering access to the Colorado Creek winter trail at the Tolovana River, was completed in October. Located at mile 57 on the Elliott Highway, the trailhead has a winter parking area "big enough for about 20 to 30 pickup trucks with snowmachine trailers," according to BLM civil engineer Roger Evans. He adds that there's an off-loading ramp, and "next summer they'll put in a toilet." Alaska Department of Transportation crews constructed the trailhead; BLM provided the design and consultation.

- At the Sourdough Campground on the Richardson Highway, the second phase of construction was wrapped up this year. The campground now has 43 campsites, about a mile of road, walking trails, a parking area and six toilets. Work on the last phase of the project started in September, and BLM hopes to have the campground ready next summer. The last phase will add parking for 12 more vehicles, a toilet, a grassy area, trails, fishing ramps, a fishing deck and an observation kiosk. All features have been designed for universal access.

- Gravel roads at the West Fork and Walker Fork campgrounds were reconditioned this summer.

- Several other construction projects are still under way. Work started this fall for two interpretive waysides: the Davis Dome Interpretive Wayside on the Taylor Highway at the Alaska/Canada border, and the Mount Fairplay Interpretive Wayside at mile 35 of the Taylor Highway. Turnouts were built, and the ground was prepared for the installation of observation decks and toilets next summer. The waysides are also ISTEA projects that were built by maintenance crews from the Alaska Department of Transportation and designed by BLM. Volunteer landscape architecture students from Colorado State University developed the initial concept for both the Mount Fairplay and Davis Dome designs.

- Earlier this year BLM awarded the design contract for the Campbell Creek Environmental Education Center in Anchorage. By the end of September the design was



Dee Ritchie

Arctic District ranger Wayne Stevens samples the well water at the Marion Creek Campground as BLM engineer Roger Evans pumps and State employee Steve Lester waits his turn. The 4,000 gallons-per-hour pump was a finishing touch to the new campground which opens next June.

about 50 percent complete, reports Jim Andrews, chief of the BLM Branch of Engineering Services. Construction is scheduled to start next year.

- A \$4.4 million project is going to provide a new access road into the White Mountains National Recreation Area. This ISTEA project is now in the stage of final design, contract preparation and permitting. The new road will provide access to Beaver Creek Wild and Scenic River for river floaters. The entire project, called the White Mountains Gateway, will include 16 miles of roadway, two campgrounds, fishing and hiking trails, a viewing deck, a gold panning area and a visitor station.

- A package of improvements has now been approved for construction in 1994 or '95 to enhance existing recreation areas along the Steese Highway. The trailheads for the Pinnell Mountain trail at Eagle Summit and 12 Mile Summit are scheduled for upgrading. Improved access will be built at the Birch Creek Put In and Take Out sites, offering better access to the Birch Creek Wild River canoe trail. Parking will be expanded at McKay Creek, an access point for BLM's White Mountains cabin system. And the Cripple Creek Campground at mile 60 Steese Highway will receive a facelift, with new well, new toilet facilities, new picnic tables and a new gravel surfacing on the roads and parking areas.

—Jane Mangus

Goodnews plant survey turns up unusual species

Goodnews Bay is one of those places where the wind blows, the weather is often wet and miserable, and fog seems to keep this Alaskan west coast area hidden most of the time.

Last July, however, Goodnews Bay's usually disagreeable weather turned unexpectedly pleasant, so scientists from the Bureau of Land Management, the Nature Conservancy and the U.S. Fish and Wildlife Service could conduct a general plant survey.

"The project is part of an effort to catalog plant species throughout the state, and is part of a wider effort to identify plant species in North and South America," says botanist Robert Lipkin of the Nature Conservancy's Alaska Heritage Program. Such efforts add significantly to our knowledge of biodiversity and ecosystems in Alaska's vast landscape.

For eight sunny days with temperatures in the 80s, Lipkin led five other scientists to mountain ridges and coastal wetlands in the area where they collected and reviewed 500 plants.

The scientists were excited—the survey was the first to be done around Goodnews Bay and pros-

pects were good that uncommon plants would be found because of the area's unique geology. The area is recognized by Alaskan scientists for its unusual tectonic plate overlap—the ocean floor plate overlaps the continental plate. In turn, ancient limestones and heavily mineralized formations are exposed which provide the type of diverse habitats expected for specialized plant communities.

Leaving Anchorage with supplies, the three men and three women flew to Dillingham and Goodnews Bay, and then by amphibious plane to their field camp at Canyon Lake. The study area encompassed 325,000 acres.

Hip boots came in handy after they landed on the crystal-clear lake and trudged across wet tundra in search of dry places to pitch tents.

Their work days were long. "The helicopter dropped us off and we'd collect and catalog plants for four and five hours before moving to the next site," says Jeff Denton, BLM wildlife biologist. They split up into two work groups. Many times they'd collect plants and press them on-site, often staying up past midnight to finish. Although the



Geum glaciale Adams

results of the survey won't be published until February, many isolated plant populations and range extensions were confirmed.

A special find was the Wallpole poppy, a plant whose button rosette flower is the size of a fingernail. What was so special about this white or yellow flowering plant? BLM botanist Debbie Blank says, "It's globally rare, occurring in only Siberia and Alaska's Seward Peninsula." About twenty poppies were located at each of four different sites.

Blank says they located many range extensions—plants occurring outside their known range. Ginny Moran, threatened and endangered species specialist for the Fish and Wildlife Service, says range extensions are common in Alaska because so few of Alaska's plants have been inventoried. One such extension they found was the *geum glaciale*, a yellow flowering plant previously found only on the North Slope.

Lipkin says, "Many plants in western Alaska have strong ties to Asia. Some plants are only found in the Beringia, which is the area between eastern Siberia and the Mackenzie River in Canada once connected by the land bridge."

The scientists also investigated habitats where sensitive, threatened or endangered plants might occur. Depending on the results of this study, there may be further research in the area.

The Goodnews project was a partnership between the BLM, the Nature Conservancy, and the Fish



Scientists conducting the plant survey in the Goodnews Bay area landed on Canyon Lake (above) and established their base camp nearby. This shows the type of terrain from which most of the plants were retrieved.



Loaded with supplies and many plant presses, the scientists endured long days so they could identify and collect the 500 plants from the Goodnews Bay plant survey area on the west coast of Alaska.

and Wildlife Service. Moran, FWS botanist, gives Denton credit for taking the initiative and orchestrating the project. She says, "Jeff (Denton) pushed to get this project done. It's extraordinary that three organizations with similar goals and objectives could come together. In the long run we saved money and reduced redundancy. We're setting a precedent."

Denton praises all his team members but is especially grateful to Lipkin, Al Batton and Julie Michaelson of the Heritage Program. "Without their specialized botanical knowledge," he says, "we couldn't have done the project." Moran adds, "This inventory is only the tip of the iceberg."

—Danielle Allen

UAF gives tuition waivers to RAPS students

The University of Alaska Fairbanks awarded four tuition waivers to Alaska Native students participating in the Rural Apprenticeship Program for Students on October 6. In a campus ceremony, James T. Mansfield, UAF Associate Director of Admissions and Records, presented waivers to Harley Huntington of Koyukuk, Patrick Snow of McGrath, Kevin Seville of Nanwalek and Julie Luke of Delta Junction.

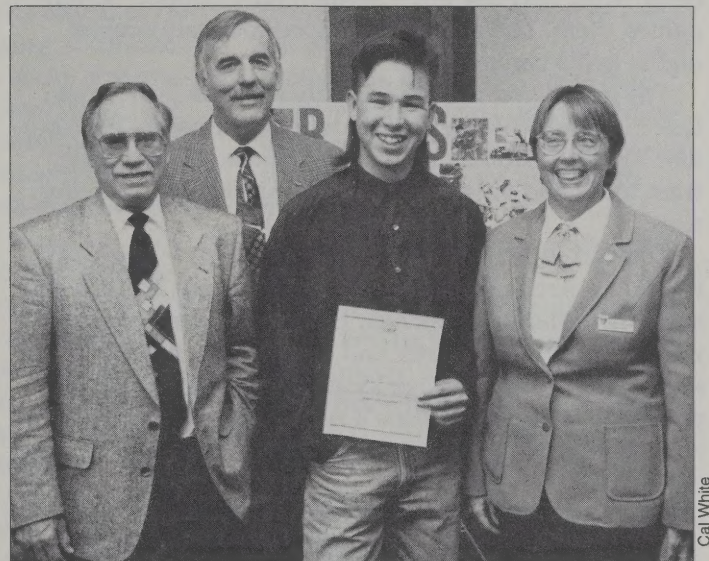
Funded by federal, state and private sectors, RAPS gives rural high school students summer employment in natural resource management. They work side-by-side with professional resource specialists to learn skills that will benefit their Native corporations that are now responsible for managing millions of acres of land and natural resources.

Huntington worked for the Bureau of Land Management for three summers—one with the BLM survey team and two with the Kobuk District. A graduate of Mount Edgecumbe High School, he is presently working as a teacher aide and bookkeeper for the Koyukuk School District. He will enter UAF in January.

Snow, a wildlife biology major and UAF sophomore, worked at the U.S. Fish and Wildlife Service's Innoko National Wildlife Refuge for two summers. This is the second time he has received a tuition waiver.

Seville, who will enter UAF in January, was a RAPS apprentice with BLM in 1991, and with the National Park Service in the Kenai Fjords in 1992 and 1993. He excelled in wildlife surveys, interpretation of natural resources, archaeology and back-country hiking.

Luke spent last summer as a RAPS worker with the Alaska Department of Natural Resources' Alaska State Parks in Delta Junction, working in the office and assist-



Koyukuk RAPS student Harley Huntington (center) proudly shows his tuition waiver from the UAF. Surrounding him are Edward F. Spang, BLM-Alaska state director, James T. Mansfield of UAF, and Helen Hankins, manager of the Kobuk District where Huntington worked.

ing the recreation staff. She is a first-year student at UAF pursuing a degree in education.

Initiated by the BLM in 1987, RAPS has since expanded to include eight other federal, state and private agencies. The UAF supports RAPS by providing apprenticeship positions and waivers to qualifying students. In 1991 RAPS became a national program, seeking to give youth across the country the opportunity to work in the field of natural resources.

—Sharon Durgan Wilson

Intrepid Girl Scouts seek route to waterfall

Sitting on a gravel bar overlooking the cascading rapids of Marion Creek, the Girl Scouts grinned at each other with a sense of accomplishment. They had found the lower reaches of the waterfall.

This was the first day with no rain. The sun beat down as they devoured their sandwiches and sunshine sparkled off the torrents of clear water rushing over tiers of huge boulders. Just out of sight, the deafening roar of the longest vertical drop of the falls drew them to explore the unknown.

The six junior and senior high school girls from Fairbanks had braved August rain and hordes of mosquitos to search for this waterfall on Marion Creek and to map a route to it. They hoped to give a memorable hiking opportunity to visitors camping at the BLM's new Marion Creek campground at mile 180 of the Dalton Highway.

The 11- to 16-year-old girls and their advisor, Angie Drake, had driven to the Marion Creek campground just north of Coldfoot on the first of August. Drake's husband, Scott, and one girl's mother, Judy Stilipec, accompanied them. The explorers camped four rain-soaked nights in the campground.

The group met with BLM, National Park Service and U.S. Fish and Wildlife Service representatives at the Coldfoot Visitor Center. They discussed how artifacts differ from litter, and how to recognize historic placer mining sites.

The Girl Scouts had several assignments to complete for BLM's Arctic District office. They hiked a half-mile up and down Marion creek near the campground to record the condition of the water and the creek banks, and to survey for possible bridge locations. For the Alaska Department of Fish and Game's water conservation project, Alaska Water Watch, they measured depth and speed of the current.

"As we started our trail-mapping project, we followed

a game trail from the edge of the campground," Drake said.

"It took us to an overlook with a beautiful view of Marion Creek. The girls moved loose rocks on the heavily eroded site, which drops off 50 to 60 feet to the creek."

The Scouts had been asked to suggest a way to handle warnings about the drop-off. They decided that negative warnings wouldn't work and recommended a small sign about 15 to 20 feet away, reading, "Caution, Drop-off."

After the game trail petered out, they went through spruce forest with dry lichens, spongy hillsides, bogs and tussocks, using map reading and compass skills to find their way. "We had a Global Positioning System unit so we had our latitudes and longitudes, but we had no placement on the map," Drake said. "Each day we hiked a little farther, working out directional errors as we mapped the best route to the waterfall."

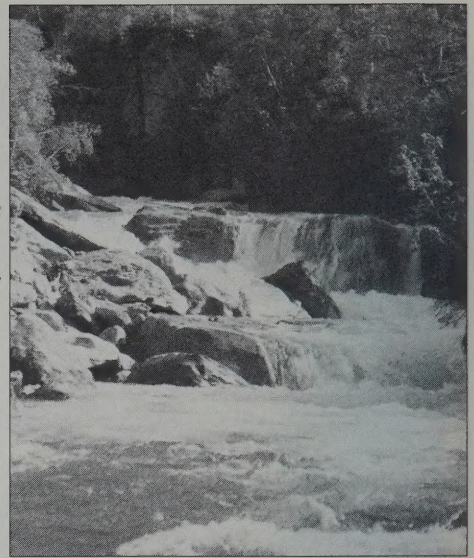
Using triangulation, they identified feeder streams flowing into Marion Creek. They looked at the topographic map for steep drop-offs, then took compass readings to hike above that point. By the last day, they found the waterfall. Marion Creek drops drastically and narrows as it cascades over large rocks. "We could see an old rock slide going into the creek," Drake said. Their picnic spot was just above this rock slide.

After lunch, they followed the roar of the waterfall. "We followed the edge of the stream through trees and brush. Luckily, everyone had a good sense of balance as we crossed swampy areas on fallen logs," Drake said. They couldn't reach the longest drop of the falls; "Still, the lower cascades are beautiful and quite impressive," said Drake.

The Scouts are now going to make a flyer showing the route to the falls, including points for viewing waterfalls. The flyer will be available to the public when Marion Creek campground opens next June. "If people can follow a topographic map, they will be able to find it," Drake said. The scouts are not recommending that BLM establish a marked trail. "Too much traffic will cause the boggy areas to deteriorate.

"The main focus for this trip was community service," Drake said. "The girls learned about opportunities to serve the community while having fun hiking."

—Sharon Durgan Wilson



The cascades of the lower portion of the Marion Creek waterfall.



Angie Drake

Trail-exploring Girl Scouts wearing their Dalton Highway Project sweatshirts in front of an historic cabin in Wiseman, Alaska.

BLM takes a hard look at pipeline operations

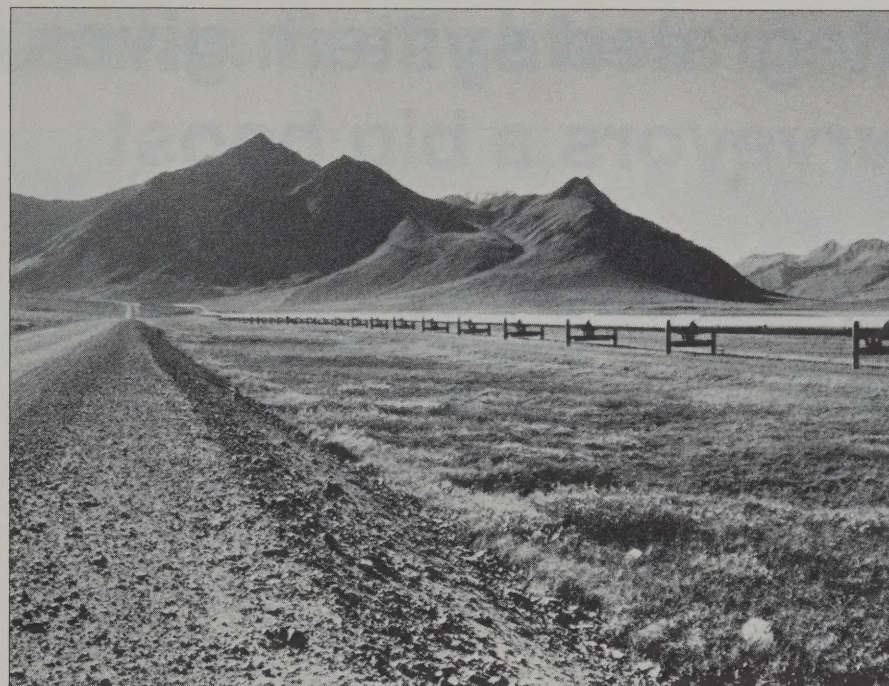
BLM's role in monitoring the 800-mile Trans-Alaska Pipeline System (TAPS) is getting a burst of energy from Director Jim Baca. Responding to criticism from several U.S. House of Representatives oversight subcommittees, Baca has set a new direction for the BLM in the Joint Pipeline Office—a combined Federal-State operation involving a number of federal and State agencies.

"This administration is dedicated to the concept of keeping our public lands as safe from environmental damage as possible," said Director Baca. "To achieve this, I have initiated a series of actions which, when taken altogether, will result in a completely revamped and proactive approach to regulating the TAPS."

Baca has appointed Dr. Jeff Zabler in BLM's Washington office as his personal representative on all TAPS matters. Zabler stays in daily contact with Alaska State Director Ed Spang and other key personnel.

Recently Spang and Jules Tileston, special assistant to the commissioner of the Alaska Department of Natural Resources, traveled the length of the pipeline and visited each facility, examining and discussing in detail with Alyeska's President David Pritchard most of the issues raised this summer before the House subcommittee on oversight and investigations.

Baca initiated a toll-free confidential hotline (800-764-5070) for anyone who has a complaint about the operation of the TAPS concerning public health and safety, the environment, or pipeline integrity. So far, 38 calls have been received, raising topics ranging from environ-



Jon Kamler

A view of the pipeline at milepost 257, eight miles north of Atigun Pass, looking south.

mental issues (leaking tanks) to labor questions (bringing in contractors), to complaints about government in general. About half of the callers have been anonymous. All questions are entered into the Joint Pipeline Office's data base, assigned to appropriate staff members and followed up to the extent possible.

Baca also hired an independent auditing firm to assess the current condition of the pipeline, and to study all environmental, safety and program management issues of the TAPS. Quality Technology Service, a Kansas firm with a strong record in auditing high technology industries, is conducting the review. The final report was due to Director Baca by November 1.

BLM has contracted with Battelle Pacific Northwest Laboratories to evaluate a new way to measure pipeline stress. A new "pig" measures the curvature of buried sections of the pipeline. A pig is a device that is run down through the pipe along with the oil. There are a number of different kinds of pigs, but the NOWSCO curvature pig carries both an inertial navigation system and a sonar system. By combining data from these instruments with fixed benchmarks, this pig

measures any change from the original shape of the pipe. A run in June indicated a number of areas that may be under stress due to settling of the pipe in the ground. Although such places pose serious concern, there appears to be no imminent threat to the soundness of the pipeline.

Batelle is also reviewing structural stress data for ten specific areas of high concern to the JPO. The pipeline office will later conduct their own independent stress analyses.

With the Joint Pipeline Office working from a detailed monitoring handbook to ensure full coverage of critical areas, the pace of audits and the demands for information in particular problem areas has increased significantly. The office has conducted three audits on various aspects of TAPS since the Congressional committee hearing and has scheduled a fourth to focus on air quality compliance.

State Director Ed Spang said, "We are determined to get our arms around the many issues which have arisen with regard to TAPS. We're well into the process now and are determined to succeed in implementing the Director's goals."

—Rob McWhorter

Integrated system gives surveyors a big boost

Mt. McKinley, North America's highest peak, served as the scenic backdrop for one of BLM-Alaska's cadastral survey field camps at Cantwell last summer. Here BLM crews were re-surveying the boundary between Denali National Park and adjacent state lands. But this camp was special because some new, experimental tools were in the surveyors' toolkit.

In the past, crews used the AutoSurveyor system to find and identify locations in the rugged, remote terrain found throughout much of Alaska. "It was a real workhorse and state-of-the-art," says section chief Joe Burns. We used to have three or four AutoSurveyors working back in the mid-1980s, but now we're down to just one system and it's getting more and more expensive to maintain. Basically it's obsolete."

The AutoSurveyor is mounted in helicopters and its inertial guidance unit has to be reset at regular intervals. To do this meant that the helicopter had to land every three

minutes—not always easy in rugged terrain.

Since then, orbiting satellites have been used to determine locations with the newer global positioning system (GPS). "But for GPS to be effective, you have to maintain constant communication with the satellite. If you lose your 'lock' on the signal, you have to start all over," said party chief Dan Weisner. The GPS may also be limited by the time window during which satellite coverage is available.

"Last year we tested a new system developed by the Geomatics Engineering Department of the University of Calgary. It combines the best of the older inertial navigation system (INS) with the new global positioning system while minimizing the disadvantages of each. This integrated survey unit uses GPS as the primary position reference but switches to the INS to bridge gaps in data when the satellite signal is lost due to trees, mountains or canyons. It also corrects itself with known locations that are part of the data-



Ed Boy

The new system takes up a lot of room, including most of the helicopter's back seat.

base," explains Burns.

All the data gathered during the helicopter flight is recorded on a laptop computer and downloaded for processing after the flight. Results are available in the field within two to eight hours. The 115-pound unit also can be mounted in trucks for ground use. This integrated system means a lot more work can be done in less time, and in all kinds of weather.

"The next step is to contract for the development of a production system that would meet all of our specific applications and then test it," says Burns. "I foresee such a system being used bureau-wide for not only surveying, but also for other resource applications. For example, a video camera could be mounted in a helicopter to photograph and map precise locations of hazardous materials sites, cultural resource sites, wildlife habitat, timber or other resources."

"If the system works as well as we think it can, we anticipate it could increase our production rates by 50 to 100 percent," Burns says. This is a significant benefit for the people who have about 47,000 miles of rectangular surveys left to do.

—Ed Boy



Ed Boy

Party chief Dan Weisner (seated) gets ready for an early morning flight to work.

AFS visits Russian firefighters

Differences exist, but it was the similarities in wildland fire fighting techniques that struck the five representatives of BLM's Alaska Fire Service staff on their visit to Russian fire fighting facilities in August. "It's another example of what I would call parallel development," said Dave Dash, fire operations chief for AFS. "With very little contact between us, we've developed very similar operations." BLM officials hope the two countries will cooperate on future development in fire fighting operations. Five Russian firefighters visited Alaska in 1992.

Bill Calkins, associate state director for BLM-Alaska, led the delegation to fire centers in Magadan and Khabarovsk. Dash and smokejumpers Tony Pastro and Bruce Ford returned to Alaska while Calkins and AFS associate manager Marvin Robertson continued on to Moscow.

For the two smokejumpers, the highlight of the visit was a parachute jump with Russian smokejumpers in Magadan. Ford and Pastro used the Russian parachute system while a Russian jumper used the American system. According to Pastro, the parachute deployment system used by BLM smokejumpers was derived in the late 1970s from the Russian chute.

The AFS representatives reviewed firefighting equipment and techniques in Magadan and Khabarovsk. A large helicopter called the MI-8 is the workhorse of the Russian fire fighting fleet. The helicopter carries rappellers, who drop to the fires on ropes. The helicopter is larger than any used by AFS, which does not use rappellers.

"Smokejumpers are used for detection," Pastro said. "Depending on the fire danger, they will fly an area once or twice a day. If they find a fire, they'll drop the jumpers on it."

Most of the equipment used in Russia is similar to equipment used in Alaska, but the AFS representatives came back with ideas for im-



AFS representatives stop for lunch on a river bar while touring fire fighting facilities in the Khabarovsk region of Russia. Behind them is an MI-8 helicopter, which the Russians use extensively in their fire operations.

provements.

Dash said the Russians have developed a better portable backpack pump. "It seemed more comfortable and easier to fill. We brought one home and are going to try it out on fires next year," he says.

The Alaskans were impressed with the expanse of territory Russian firefighters are called upon to protect. Magadan and Khabarovsk are two of 20 regional fire bases in Russia. "If you look at a map of Russia, Alaska would sit in a little corner of the area. AFS has 150 million acres. Russia has two billion," Ford said.

Calkins said firefighters in Russia work full time and were interested in the seasonal hiring practices used in Alaska. "They're in a new capitalist environment, trying to contract services from the private sector. Of course, we're seasoned hands at that," he says.

In Moscow, Calkins and Robertson met with Nikolai Andreev, director general of the National Aerial Forest Fire Protection Service. They presented a letter from Edward F. Spang, state director for BLM Alaska.

In his letter, Spang noted that Alaska and Russia share common features of climate, geography, veg-

etation and vast, roadless areas of land. "It is desirable for both countries to learn of each others' methods and techniques of fire management," Spang said.

Following the visit, Spang says BLM will develop procedures for future exchanges with the Russians. These exchanges will include:

- sharing information on the factors affecting fire management, such as weather prediction, fire behavior, fire detection and natural resource values;
- sharing managers to better understand methods of dealing with wildland fire fighting operations and management;
- sharing technicians and specialists whose primary responsibilities involve fire suppression activities such as smokejumping and rappelling, aerial delivery systems and other operational procedures; and
- identifying areas for possible future agreements between the two countries concerning fire management.

Calkins said the Russians are eager for future exchanges with Alaska and that both countries could learn by studying each other. "These people are tough and resourceful in the face of incredibly hard times."

—Andy Williams

Faces from Alaska's past

When world leader of the Russian Orthodox Church, Patriarch Aleksy II, visited Alaska in September, BLM state archaeologist Bob King had a treasure of a gift for him. King arranged to give to the "Russian Pope" copies of the only known photographs of the first Russian Orthodox churches on the Pribilof Islands, a remote group of five tiny islands located about 400 air miles southwest of Bethel, Alaska, in the Bering Sea. In Alaska, many of the early converts to the religion were Aleuts brought to the islands by the Russians in the last century to harvest seals.

The photographs were taken in 1871 by Dr. Hugh Henry McIntyre (1844-1906), a medical doctor and Civil War veteran hired in 1870 by the Alaska Commercial Company to oversee the harvesting of the seals on the islands. The company had obtained a 20-year franchise of the seal rookery. McIntyre's pictures show early village life on the two islands in the first decade after the Russians departed.

King, always on the lookout for cultural finds, had stumbled upon the photographs in 1992 in Indiana, and purchased them before he realized their significance. "BLM



has had, or currently has management responsibility for most historical and archaeological sites in the state," he says. "Anything pertaining to archaeology or history thus may have relevance to BLM, and certainly to our overall understanding of the history of Alaska."

Historical photos are of particular interest to King. "They provide clues for archaeological remains found on BLM land, and tracing people in photos can also give us names of informants and informa-

tion about resources."

At one time BLM managed most of the lands in Alaska. King says, "Before the 1970s, when lands started being conveyed under the Alaska Native Claims Settlement Act and then by the Alaska National Interest Lands Conservation Act, permits were required for the commercial use of public lands. BLM was the main federal agency authorized to give these permits, and later to convey lands to Alaska Natives under ANCSA."

The photos are stereographs, which become three-dimensional pictures when seen through a stereo viewer. An edition of 19 photographs published in the 1870s include 18 which were taken on St. Paul Island and one on St. George Island. Pictures show the rich seal rookery with seals basking on the rocky beaches, the seal rendering plant along the coast, and the structures and people on the islands at that time. In one photo, two Aleuts in western dress stand before the salt house where salt was stored for use in processing the seal skins. Another shows the storehouse and company office with three westerners, including a well-dressed woman in clothing typical of that time.



Eskimo berry pickers in Nome, Alaska

Rare old photos show Aleuts on Pribilof Islands in 1870s

There's also a view of an Aleut man and an ox-drawn cart; the photo is labeled "High-draw-lick Works."

"One fascinating photo, 'A Native's House,' shows the effects of ongoing acculturation on the Aleut people," says King. "The main dwelling is a semi-subterranean sod and rock house with a sod roof." An Aleut man sits near a side door and an imported wooden window frame with six panes of glass. There's a separate storehouse with a wooden door behind him, and to the left is another smaller structure, also with a wooden door.

Two of the only known photos of the first Russian Orthodox chapel on St. Paul Island are also in the collection. The Chapel of Saints Peter and Paul was built by the Russian-American Company in 1840 from imported Sitka spruce logs. In 1877 it was torn down and replaced by another structure.

"It's easy to speculate why McIntyre's photos were mostly of St. Paul Island..."

The group of pictures includes the only known photo of the first Russian Orthodox church on St. George Island, identified by the Aleutian/Pribilof Islands Association as the Chapel of St. George the Great Martyr. Built out of driftwood on St. George Island in 1833 by the Russian-American Company, the building existed until 1875 when it was replaced by another structure.

"It's easy to speculate why McIntyre's photos were mostly of St. Paul Island, where he was living," King says. "His photos were almost certainly done by the 'wet-plate' method, where a negative had to be prepared on the spot with chemicals, put into the camera wet, and then developed soon after the picture was taken. For the St.



Ft. Wrangell

George photo, McIntyre would have had to have brought along a virtual traveling studio to process his photos on the spot. Not easy anywhere!"

McIntyre's photographs played a role in the politics of the late 1880s, says King. "The 20-year lease of the American Commercial Company over the seal rookery was ending. A special Congressional investigation was called to examine the situation, including charges of mistreatment of Aleuts employed by the company," King says. "Dr. McIntyre was called to testify before the Committee on Merchant Marine and Fisheries appointed by the House of Representatives to investigate the matter. He brought along his stereographs of the Pribilof Islands to show committee members."

"What the committee got from Dr. McIntyre was a basically upbeat account of the American Commercial Company's involvement on the islands. But, with other testimony and evidence the company lost their franchise over the seal rookery in 1890. Instead, the Northern Com-

mercial Company obtained the coveted 'plum' for the next 20 years until 1910."

McIntyre returned to Vermont where he co-owned a block of commercial businesses. "Thanks to Dr. McIntyre," King says, "images of the post-Russian period on the Pribilofs provide unparalleled insights into what life was like there so many years ago—a life much changed today. And even Patriarch Aleksey II can share the experience!"

—Janet Malone



Aleuts on St. Paul Island

frontier flashes

The Resource Apprenticeship Program for Students (RAPS) was expanded under an agreement signed in September between the Bureau of Land Management and ACTION, a federal volunteer agency which oversees the Volunteers in service to America program (VISTA).

RAPS was instituted by BLM-Alaska several years ago to provide opportunities for at-risk students in natural resource management. The five-year agreement will expand the use of VISTA volunteers to BLM's national RAPS program.



Federal fall subsistence hunting season for moose and caribou in Alaska Game Management Unit 13 closed on September 20. Staff of BLM's Glennallen district office, which manages the subsistence hunting program, issued 1400 permits for caribou and 500 permits for moose. Permits are issued to residents of the game management unit for use on unencumbered federal lands managed by the BLM within the unit. A second caribou season is scheduled for January through March, and more caribou permits will be issued.

Recreational use of BLM campgrounds on the Denali Highway has increased over the past five years. Visits to Brushkana Creek and Tangle River campgrounds rose 50 percent, while visitor use of the Tangle Lakes Campground has nearly doubled.

The most popular activities reported by people are camping, sightseeing, fishing, picnicking, berry picking and photography. Bicycling races and tours are increasingly popular along the highway.

During late summer and early fall, the highway and campgrounds fill with hunters



In October, cadastral survey deputy state director George Oviatt met with Alaska Native contractors who did land survey work in the state for BLM in 1993 under the Indian Self-Determination Act (Public Law 93-638). BLM has begun drafting specifications for 1994 survey contracts.

The meeting provided a forum for future contractors to learn about the 638 program and find out which survey projects will be available for contract next spring.

Four villages of the Kuskokwim Corporation received patents to more than 254,000 acres of land on October 13. BLM state director Ed Spang signed the four surface patents for the Alaskan villages of Crooked Creek, Georgetown, Sleetmute and Stony River. At the same time, the Calista Corporation received four subsurface patents. The Kuskokwim Corporation is made up of 10 villages in the Calista Region, which is located in western Alaska.

Patent is given after the land has been surveyed to confirm earlier interim conveyance.



More than 850 fires burned 713,000 acres in Alaska during last summer's fire season. The first fire of the year was reported April 13 and the last on August 19. Overall, lightning caused fires that burned about 710,000 acres and humans caused fires burning about 3,000 acres.

Statewide, 78 emergency firefighter crews were hired, earning \$4.3 million in wages; BLM's Alaska Fire Service paid \$580,000 of the total. Crews come from more than 50 villages, and their wages provide a major source of cash income for the villages.



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